A Snapshot of Prostate Cancer

Incidence and Mortality Rate Trends

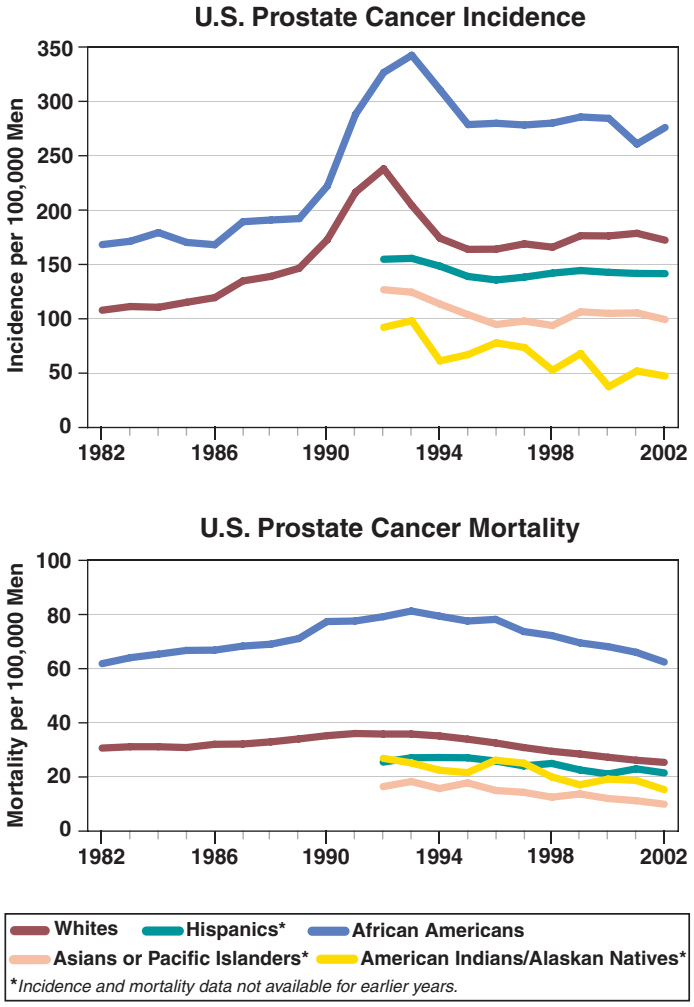
Prostate cancer is the most common cancer, excluding skin cancer, and the second leading cause of cancer-related death in men in the United States. Over time, African American men have had higher incidence and at least double the mortality rates compared to men of other racial and ethnic groups.

Prostate cancer incidence rates rose dramatically in the late 1980s. This increase reflects improvements in detection and diagnosis through widespread use of prostate-specific antigen (PSA) testing, which received initial Food and Drug Administration approval in 1986. In the early 1990s, prostate cancer incidence began declining and has leveled off in recent years.

Mortality rates for prostate cancer have declined since the early 1990s. It is estimated that approximately $8 billion* is spent on prostate cancer treatment each year in the United States.

*In 2004 dollars, as reported in Brown ML, Riley GF, Schussler N, and Etzioni RD. Estimating health care costs related to cancer treatment from SEER-Medicare data. *Medical Care* 2002 Aug; 40 (8 Suppl): IV-104-17.

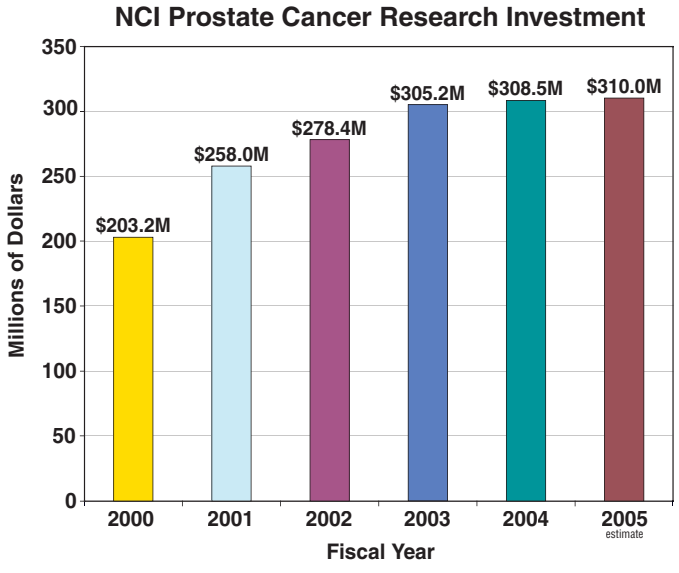
Source for incidence and mortality data: Surveillance, Epidemiology, and End Results (SEER) Program and the National Center for Health Statistics. Additional statistics and charts are available at: http://seer.cancer.gov/



Trends in NCI Funding for Prostate Cancer Research

The National Cancer Institute's (NCI's) investment in prostate cancer research has increased from $203.2 million in fiscal year 2000 to an estimated $310.0 million in fiscal year 2005.

Source: NCI Financial Management Branch
http://www3.cancer.gov/admin/fmb

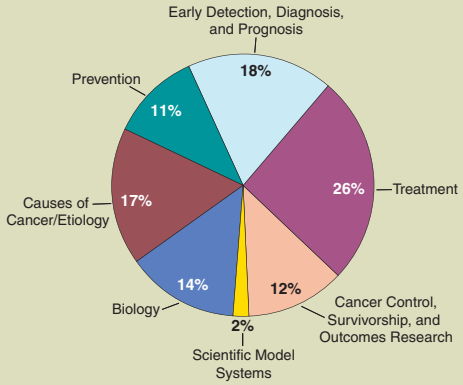


Snapshots can be found online at: http://planning.cancer.gov/disease/snapshots.shtml

Examples of NCI Research Initiatives Relevant to Prostate Cancer

- Eleven prostate cancer-specific **Specialized Programs of Research Excellence (SPOREs)** are moving results from the laboratory to the clinical setting. http://spores.nci.nih.gov/current/prostate/prostate.html
- The NCI is participating in a series of **Prostate Cancer Funders Meetings** to identify research gaps and barriers to progress and to initiate research collaborations. Priority areas include biomarkers development; clinical trials methodology; molecular determinants of initiation, progression, and metastases; and therapeutics and bone metastases.
- The **Southern Community Cohort Study (SCCS)** is examining why prostate cancer rates are high in African American men. http://www.southerncommunitystudy.org
- The **In Vivo Cancer Molecular Imaging Center (ICMIC)** grants facilitate collaborative, multidisciplinary research on cellular and molecular imaging of cancer. ICMIC projects have included noninvasive imaging of gene expression in prostate cancers and combined metabolic PET imaging/molecular pathology projects to assess disease progression and response to treatment in patients with prostate cancer. http://imaging.cancer.gov/programsandresources/specializedinitiatives/icmics
- The **Selenium and Vitamin E Cancer Prevention Trial (SELECT)** is determining whether prostate cancer can be prevented by dietary supplements. http://www.crab.org/select

NCI Prostate Cancer Research Portfolio



Percentage of Total Dollars by Scientific Area
Fiscal Year 2004

* Data on training grants are not included in this figure. A description of the relevant research projects can be found at the NCI Cancer Research Portfolio website at http://researchportfolio.cancer.gov.

- **Centers for Excellence in Cancer Communication Research** are supporting interdisciplinary research to facilitate rapid advances in knowledge about cancer communications, including studies on how patients, cancer survivors, and the public seek information related to prostate cancer. http://cancercontrol.cancer.gov/hcirb/ceccr/
- The **Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial (PLCO)**, a large-scale clinical trial, is determining whether specific cancer-screening tests are reducing deaths from these cancers. http://www3.cancer.gov/prevention/plco/index.html
- The **Prostate Cancer Home Page** provides up-to-date information on prostate cancer treatment, prevention, genetics, causes, screening, testing, and other topics. http://www.cancer.gov/prostate

Selected Opportunities for Advancement of Prostate Cancer Research

- Define the molecular and cellular processes that lead to prostate cancer initiation, progression, and metastases, and use this information to develop interventions for early detection, diagnosis, prognosis, and treatment monitoring.
- Accelerate development and validation of optimal individualized treatments that target the molecular and cellular characteristics of specific types of prostate cancer.
- Discover the genetic, biochemical, environmental, and lifestyle factors and their interactions that increase risk for prostate cancer and lead to its development and progression.
- Continue to examine and understand the biology of the normal prostate, especially as it relates to the earliest stages of malignant transformation.
- Conduct translational research and early phase clinical trials to ensure that novel therapeutics are adequately explored.